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ABSTRACT

The dimensions, status, and improvement of institutional research in junior colleges are considered in this topical paper. Its dimensions are discussed in terms of definition, purposes, and boundaries and its status is then viewed from different perspectives. First, it is admitted that the present role of institutional research is difficult to determine, and that, to date, such research has not been broadly accepted as a necessary function in the public junior colleges. Second, in spite of institutional recognition in terms of clerical or advisory resource support, a tendency to view research coordination as a part-time activity or to neglect compensating academic researchers appropriately has been noted. Important considerations in the development of an institutional research program are then suggested. Alternative types of organization for research are examined, important guidelines for the development of a research program are discussed, including: (1) the necessity to base the organization on a clear philosophy of research; (2) the need to focus responsibility on one individual or central group having direct access to the college president; (3) the advisability of insuring broad participation by faculty and staff; and, (4) the possibility of using individual consultants or a consortium of related organizations to provide assistance and expertise. (J0)

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THE QUESTION OF
COMMUNITY COLLEGE RESEARCH

By

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and
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A Topical Paper:

The Florida Community Junior College
Inter-institutional Research Council

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INTRODUCTION

The issue of research has only recently become prominent in the community college environment. Pioneer writers and publicists of public junior college development, in concentrating largely on the teaching function of the institution, gave but passing attention to the activity. Indeed, these early advocates often differentiated the community college from senior institutions in terms of its teaching emphasis and quality as contrasted to the latter's stress on research. An orientation away from research thus became an inherent part of the community college mystique and was usually translated by it into heavier teaching loads and more faculty involvement with students.

The last few years, however, have seen a growing inquiry into whether community colleges are in fact fulfilling the high aims once so confidently announced. Though still muted, demands for evidence are beginning to be heard. Even the most ardent proponents of the movement appear to recognize shortcomings and a consequent need for a firmer base for institutional philosophy and methods which would come from empirical study. Yet there is no general agreement on the scope of desirable research or on preferable approaches for its accomplishment. Not only is there a lack of consensus, but discussion of the subject suffers from semantic obscurities and scanty information. The role of research in the institution does not seem to have been subjected to much rigorous analysis.

In view of its uncertain status on most campuses, and due to the ambiguity with which its potential is regarded, this paper will explore the purposes and current practices of research in the two-year college to determine principles and procedures which may be of value to an institution in considering its policies on the matter.

THE DIMENSIONS OF RESEARCH

All too seldom is there a clear expression of what is meant by research. Terms such as "study", "investigation", "analysis", "survey", or "examination" are used interchangeably or else are finely distinguished through pages of erudite hairsplitting. Argument abounds on whether "data" and "information" are sufficiently dignified to be included with "knowledge" under the umbrella of research. Authors fail to discriminate between research about as opposed to research within an institution, with resultant confusion of these distinctly different objectives.

A Look at Definitions

Research can, of course, be categorized in several ways. On the one hand it may be regarded as basic (or "pure") -- that which is intended to advance the frontiers of knowledge and perhaps without immediate utility. Or, more commonly in education, research may be of the applied (or operational) type -- designed to produce answers to problems. Research may also be classed as individual or group, or as professional (discipline-directed), institutional, or interinstitutional, each of which in turn may involve either basic or applied investigation. All of these are likely to be found in varying degree and combinations within the confines of the "research university". Basic research, as well as that for enhancing individual competence in a discipline,¹ are beyond the compass of this exploration.

The focus of this paper therefore will be on institutional studies of an operational nature. Thus limited, institutional research has been variously defined as that "designed to improve institutions of higher learning," as "all studies done within the college," as "self-study by a college designed to improve the institution," and as that "which is directed toward providing data useful or necessary in the making of intelligent decisions and/or for the successful maintenance, operation, and/or improvement of a given institution."² One author is even willing to expand the function to include "an attempt to implement solutions."³ Roueche and Boggs (1968) consider research as being "...those systematic and fact-finding activities within a collegiate institution focused upon current problems and issues with institutional improvement as the associated outcome," but caution that "the mere compilation of readily available data cannot be labeled 'institutional research'."

¹Setting aside these kinds of research should not in any way be construed as downgrading their importance, especially that research involving professional self-improvement. See Anderson (1964) and Forbes (1966) for reasoned justifications for discipline-directed research in junior colleges.

²Successive definitions are those of Brumbaugh (1960), Roueche (1968), Marsee (1965), and Stickler (1961).

³Tyrrell (1969).

Research Purposes

In his landmark monograph Brumbaugh (1960) suggested that institutional research is indispensable for policy formulation, planning, management, and for evaluation. According to Swanson (1965) it may be directed more specifically at aspects of: goals, students, faculty, curriculum, facilities, administration, finance, and public relations. Others point to the continuing need for more sophisticated research in particular areas such as student personnel services, curriculum, teaching, and innovation.¹

Although the subject is relatively new to the literature of junior colleges, several significant surveys have been made in the past decade on the research interests of institutions as revealed by their practices. These show plainly that emphasis throughout the period has been mainly on students, then on curriculum, and thirdly on institutional operations, with minimal attention to instruction (Table 1).² Roueche (1968), from his observations at the Clearing House for Junior College Information, is highly critical of a plethora of studies devoted to identifying the already identified. Most studies, in his opinion, are descriptive rather than evaluative and are lacking in depth, balance, organization, and analysis.³

A Comprehensive Concept Proposed

The implication is unmistakable that junior college research should have no narrow boundaries. Whether data is gathered for special reports, or whether studies are designed to evaluate methods or to effect change, is really immaterial. The single criterion should be simply that of whether the project will answer an outstanding question of importance to the institution.⁴ Under this broad concept much of the debate on "what is institutional research" becomes irrelevant since the activity would now include all purposeful studies and non-routine data collection needed for evaluation and decision-making.

¹Respectively: Deyo (1961); Marsee (1965); Roueche and Boggs (1968); and Johnson (1969).

²Canfield (1967) stresses the apparent paradox in claims of teaching effectiveness and the accompanying paucity of supporting evidence. Stating in 1961 that "Evaluation of instruction is largely a missing entity" Johnson again concluded in 1969 that research on "instruction and methods of teaching are notably neglected." Roueche (1968) has charged that while "evaluation is an essential ingredient of the instruction process," it is not being done.

³Mathies (1967) and Thompson (1967) strongly support Roueche.

⁴Brumbaugh (1960) has noted that merely to maintain quality in this era of rapid change is a major issue requiring decisions based on research.

THE STATUS OF INSTITUTIONAL RESEARCH

The present role of institutional research in the public junior colleges of the nation is extraordinarily difficult to determine. Literature on the subject is sparse. Apparently only one large-scale and wide-ranging study has been made since the early 1960's.¹ Nevertheless, most if not all institutions have produced uncirculated studies of varying breadth and expertness for their own purposes. Canfield (1967) has called attention to this reservoir of "fugitive" information that doubtless exists but is unreported. Roueche and Boggs (1968) consider that only a small number of institutional investigations are forwarded to the ERIC system. However, there is sufficient material in the public domain to permit some assessments.

The literature sharply reflects the fact that to date institutional research is not broadly accepted as a necessary function of the public junior college. In his survey in 1965 of 336 two-year institutions, Swanson found only 19 percent with a formally organized research program; four-fifths did little institutional research and less than one of ten had a separate budget item for the activity. More recently Roueche and Boggs (1968) determined that the average research study per institution was probably just over one a year and that most educational decisions were still based on applied logic.²

Swanson's 1965 findings on the absence of formal research programs are indirectly supported by inquiries into the internal assignment of responsibility for the function. Through the 1960's, at least, there appear to have been but few efforts to centralize research (Table 2). Relatively seldom did colleges have either full-or part-time persons responsible for the activity. This situation may have changed somewhat in later years since Roueche and Boggs' sampling in 1968 disclosed a marked increase in the number of coordinators, mainly part-time.

Institutional support of research has been equivocal in other respects as well. Growing interest in the subject led in mid-decade to Federal sponsorship of several short-term research training institutes to better prepare practitioners. Review of attendance at two such institutes conducted by the University of California, Los Angeles discloses a tendency for colleges to view the coordination of research on their campuses as a part-time assignment for administrators, counselors, and teachers. A similar institute in New York State reflected an even more casual approach to staffing (Table 3).

¹Swanson (1965). Roueche and Boggs' (1968) report, while a scientific sampling of all junior colleges, is less informative for the purposes of this paper.

²In 1961 Johnson summed up the prevailing attitude toward institutional research by saying: "Many - and apparently most - two-year colleges, give only casual attention to the conduct of and organization for institutional research."

If the more common practice is to decentralize, the burden of executing studies then falls on staff and faculty. But while institutions seem willing to support the effort in a small way with existing clerical and advisory resources, they do not encourage the activity through devices such as lighter teaching loads, compensatory time, and extra pay (Table 4). This attitude is justified mainly by "lack of time" and the nonavailability of expert guidance (Table 5). At bottom, of course, insufficient time may be only an euphemism for lack of funds. In this connection, Swanson (1965) concluded that faculty participation in research is definitely handicapped by lack of released time, schedule conflict, low interest, inadequate training, and a need for clerical help. No matter what the cause, the fact that junior college faculty does not publish an appreciable amount of institutionally-related material is amply documented.¹

The impression gained from a review of the research efforts of junior colleges is again one of institutional ambivalence. There is no shared pattern either of acceptance or emphasis on the activity. At the same time, however, there is a large demand for information on projects and practices in companion institutions and by educators within the senior colleges.² This paradox seems to support a conclusion that there is a felt need for research, professionally conducted, but that the very lack of competence in the field is at the root of much of the uncertainty.

TOWARD AN IMPROVEMENT

Each college obviously must decide for itself the role that research can and should play in the daily life and future advancement of the institution. An appropriate philosophy therefore is paramount. From such a determination will flow decisions on relations with and dependence upon other research agencies, the allocation of local resources, and ultimately a program with delineations of what and why and when and how.

Development of a philosophy for research will be greatly affected by happenings elsewhere with respect to related investigations and available support. Indeed, regional understandings on an equitable division of labor may be found advisable after viewing the respective interests, competences, and resources of the parties concerned (Figure 1 - Appendix A). In any case the possible contributions of state and university research groups are factors. A major step in this direction has taken place in Florida. The University of Florida, through its Institute of Higher Education has formed a research consortium of fifteen junior colleges, the Florida Community Junior College Inter-institutional Research Council.

¹D'Amico and Martorana (1962).

²Mathies (1967).

A philosophy of research also will depend on a weighing of the scale of effort to be undertaken by the institution. Judgements in this regard are always tentative and subject to later revision and adjustment. A model which relates costs in resources to level of effort may be found helpful in arriving at an initial conclusion (Figure 2 - Appendix A).

Alternative Organizations

Once the desired level and extent of research to be undertaken is decided, the important question of organization must be faced. Responsibilities and relationships must now be conceptualized. Once more, however, no common pattern appears in current practice. Debate is still open on most aspects of the subject. Roueche and Boggs (1968), for example, believe that much research can be conducted with present resources, that the most important factor is institutional willingness to set about the task.

Most investigators appear to be in agreement, however, that a head of research should be designated.¹ He is variously proposed as a line official (director) or as a staff member (coordinator).² There seems to be an almost unanimous opinion that the incumbent should report directly to the president or to a top representative (vice president or dean).³ Only in this way, it is felt, can access to all needed information be assured, priorities maintained, and effective coordination carried out. This does not mean that the research head interjects himself into the routine fact-gathering and reporting process. Neither does he usurp decision-making prerogatives. It is his function to use data for research purposes - to find answers and to recommend action.

All authorities view an institutional-wide advisory committee as essential.⁴ But the exact relationship between this committee and the president on the one hand and the head of the research effort on the other is notably missing from the many

¹Brumbaugh (1960). Cottrell (1969) supports a full-time assignment.

²For Pasadena City College, Michaels (1966) recommended that the head be a line officer, reporting directly to the president. Hirsch (1966) feels he should occupy a staff position with no other potentially conflicting role.

³Lyons (1969); Stickler (1961 and 1965).

⁴Michaels (1966) suggested that the committee for Pasadena City College consist of the deans and librarian. Such a restrictive composition, however, might well negate the committee's role in interpretation and enlisting support.

discussions of the subject.¹ Since the committee does not itself control resources and so is limited to recommending and reviewing actions, a clear line of access to the president would seem appropriate.

Expert guidance for research is another necessity and can be troublesome. The weakness in assigning the function to a top administrator (or in its retention by the president) as an added responsibility becomes quite apparent here. Not only can the task be time consuming but high level administrators may not always have the special competencies required.² In contrast, a full-time head can devote his entire attention to a research program. Further, if his preparation is inadequate, the assistance of a consultant can be sought.

A consultant offers many advantages, particularly to the smaller institution. If drawn from a university he is likely to be both experienced and able to marshal added help from his colleagues and graduate students. Such a person is usually aware of similar or related studies by other agencies and thus can help prevent waste motion. Most importantly, he is knowledgeable in profitable methods and avenues of approach. The extent of his participation naturally would depend upon the scope of research to be conducted and the skills of local personnel. The cost of such a consultant would be minimal in terms of value received.

Another possibility is that of a research agency supported by a number of colleges. The idea is for several institutions to establish a jointly financed enterprise for handling the more complex research projects. The major consideration in such a solution, especially for the smaller school, is the relative worth of anticipated results as compared to costs. Florida's Research Consortium includes as one of its primary purposes the provision of consultant services to its member colleges. In addition, the Florida Community Junior College Inter-institutional Research Council conducts a series of in-service workshops on research methodology for institutional representative, faculty members and administrators and offers research training assistantships to faculty members from member institutions who wish to do advanced work. While the benefits of such consortial arrangement cannot replace a well organized institutional research program it can supplement existing programs. This appears to be especially true for those colleges with limited resources for institutional research.³

¹Marsee (1965) inferentially considers the committee as a working group to "assist" the coordinator. He emphasizes that its responsibility is for research and not for decision-making.

²Stickler (1961) has stressed the potential magnitude of the endeavor: "I do believe that without half trying I could keep an institutional research agency in my junior college busy for a hundred years."

³The coordination of research between its member colleges as well as comprehensive statewide studies conducted by the Florida Community Junior College Inter-institutional Research Council, while extremely valuable, fall outside the scope of this paper.

Emerging Guidelines for Institutional Research

Despite the equivocal reception accorded institutional research as an organized and separate function in the public junior college, a general pattern of preferred practices is beginning to form. The literature suggests a number of guidelines (abbreviated in Appendix B) which would be helpful in organizing an optimum research effort. These proposals naturally must be adapted to the situation found in each college; none is prescriptive.

- A philosophy of research for the institution is widely considered as the foundation upon which the program should rest. It should express the purpose, scope, and degree of commitment to the endeavor.

- Experts agree that responsibility should be vested in one individual or body so there will be a central focus for systematic planning and effective coordination of research activities throughout the college.¹

- While it is felt desirable that the head of the research program report directly to the president in a staff capacity, his harmonious relationships with all elements of the institution are vital. The wide-ranging nature of his inquiries makes it acutely important that he be regarded as an objective researcher and service resource and not as an inspector or evaluator. Still, he must be free to give his best professional opinion and suggestions, sometimes on sensitive matters. The position is thus one of great delicacy.

- Suspicions of the motives and reports of the research chief can be effectively countered by the establishment of an institution-wide research advisory committee. This body, comprising both faculty and administrators, can be the central planning agency for the research effort and can serve as link between the chief and all portions of the college, enlisting understanding, support, and participation. Its functions can include recommendations on proposed studies, priorities of projects, allocation of resources, and results of evaluation and review. With the research head as a member, and with access to top administrators, it is in a position to exercise energizing and synergistic functions.

- Adequate financing should be included as a line item in the institution's budget, perhaps in the range of 2-3 percent of the total.² Cottrell (1969) and Stickler (1965) have estimated that a respectable junior college research program could be financed for a yearly expenditure of from \$10,000 to \$25,000. Dependent upon the basic philosophy, such funding should be supplemented by provisions for clerical and material help and for compensation in time and/or pay for persons undertaking research projects as added tasks.

¹See Brumbaugh (1960)

²Swanson (1965) suggests 2-3 percent. Mayhew (1965) recommends 3-5 percent. Cottrell (1969) agrees with 2-3 percent. For Pasadena City College Michaels (1966) proposed 1/2 of 1 percent.

- Since available resources in personnel and funds are likely to be insufficient to the need, and since local expertise will probably remain limited, the most careful planning will be required to identify investigations which can and should be conducted. The program should include only those projects which promise particular gain or usefulness to the institution.

- Broad participation in the research program by faculty and staff is a must.¹ Otherwise, the activity is apt to be misunderstood and possibly viewed as a threat. Importantly too, it is only through participation that the variety of knowledge and skills within the college can be brought to bear on problems and their solution. An object also is to legitimize research as a useful tool for determining action.

- In most areas other than simple data gathering, expert guidance will be valuable in helping to define the purposes and objectives of research projects and to outline and perhaps to assist in applying suitable methods. The institution may be fortunate in having a research head with the necessary talents. If not, and dependent upon the complexity of the study, the employment of a qualified consultant may be advisable.

- Cooperation between institutions may often conserve effort and resources by preventing duplication, by better division of labor, and by exchanging pertinent information. Activities would include contact not only with neighboring colleges but also with academic and research departments of senior institutions as well as educators in governmental agencies and private organizations. Consortial arrangement such as the Florida Community Junior College Inter-institutional Research Council should be carefully considered.

- The ready availability of data and information is of continuing concern to institutional researchers and to faculty and administrators throughout the field of education. Far too often previous studies cannot be located or related work by other agencies or institutions is unknown or uncataloged. A central repository of the institutional library or research office, is considered an essential part of the total research program.^{2, 3}

¹Brumbaugh (1960); Cottrell (1969); Roueche and Boggs (1968); Stickler (1961).

²Johnson noted in 1961 that only half of the colleges in his survey maintained central files.

³The Florida Community Junior College Inter-institutional Research Council provides such a repository of all research done in the junior colleges of the state, The Florida Community Junior College Research Review.

- Since much institutional research will be accomplished by staff and faculty, and since in all likelihood this work will be inadequately compensated, special incentives should be provided. Public acknowledgement of contributions may be made and publication encouraged.¹ Professional recognition may be found sufficient in itself to inspire enthusiasm and to stimulate a high quality product.

- Research findings are frequently of immediate or potential usefulness to others in the junior college community. College administrators have given positive indications of their deep interest in studies and innovations on other campuses.² The circulation of reports is widely supported by educators at all levels and can be expected to increase, which will make it even more necessary to install a central screening office at each institution.

- Finally, as is so strongly urged by authorities in the field, the conclusions which come from research need to be used.³ Otherwise the activity is one of form rather than substance. After all, the fundamental purpose of research is to seek improvement and improvement can only come from action.

THE QUESTION OF COMMUNITY COLLEGE RESEARCH

It is apparent that institutional research is of growing concern to the public junior colleges of the nation. However, its proper role is still in flux. There is little consensus as yet on scope, purposes, organization, or its prospective usefulness to most institutions. Nevertheless, interest is increasing, theoretical underpinnings are forming, the literature is expanding, and a field of activity is emerging.

As the tempo of change continues to mount the processes of decision-making become ever more complex. Higher education is now being called upon to demonstrate new qualities of efficiency, to adopt management practices developed in the administration of business and government.⁴ Not only does the community college face this challenge but it must also cope with educational enigmas for which there are no precedents. As these variables multiply, good judgement and experience are no longer adequate guides to action. Today's decisions must rest on a firm base of evaluated data which stem from an organized and systematic effort.

¹Especially desirable for unsponsored research in curriculum and in instruction, according to D'Amico and Martorana (1962). Anderson (1964) considers an encouraging atmosphere to be particularly important. Stickler (1961) cautions however that "publication is not the import thing; ultimate improvement is."

²Roueche and Boggs (1968). Possibilities and limitations of institutional applications are suggested by Koch and LaVire (1967). Mathies (1967) offers conclusive evidence of widespread extra-institutional interest.

³Johnson (1969); Mayhew (1965); Roueche (1968); Roueche and Boggs (1968).

⁴Knapp (1969).

In the end, each college must arrive at its own answer to the problem of research. There are many possibilities in philosophy, in organization, and in execution. The most workable combination of factors is a determination that only the school can make. But the need to make some sort of determination is a pressing one for a number of institutions. Suggestions and guidelines are available for consideration. The question is no longer that of "whether or not" but of "what and how."

TABLE 1

EMPHASIS IN INSTITUTIONAL RESEARCH

<u>Subject</u>	<u>Three Studies*</u> <u>(1959-61)</u>	<u>Roueche</u> <u>(1968)</u>
Students	42%	42%
Faculty	10%	9%
Instruction	1%	1%
Curriculum	22%	21%
Student Personnel Programs	11%	7%
Institutional Operations	12%	17%
Other	2%	4%

*Reduced from 10 categories in Johnson's summary of 1961. Studies by Sprague (1959; N = 44); Johnson (1961; N = 25); Swanson (1961; N= 6).

NOTE: All figures in both columns rounded to nearest whole number. Figures show percentage of respondent institutions indicating recent studies in the respective subject area.

TABLE 2

RESPONSIBILITY FOR INSTITUTIONAL RESEARCH

<u>Study</u>	<u>Person Responsible</u>	<u>Frequency</u>
JOHNSON (1961) - N = 100	Full-Time Coordinator	2%
	Part-Time Coordinator	27%
	Decentralized Organization	43%
	Little Institutional Research	28%
SWANSON (1965) - N = 243 (See Note Below)	Full-Time Coordinator	1%
	Part-Time Coordinator	18%
	Research Committee/Council	14%
	Divided Responsibility	41%
	No Formal Organization	40%
	Outside Consultants	28%
ROUECHE (1968) - N = 70	A Person Hired to Coordinate	23%
	Pres., Dean, Counselor Coordinates	44%
	Without Regular Coordinator	33%

NOTE: Figures indicate the percentage of respondent institutions answering the item affirmatively. Respondents in Swanson's study were able to check more than one arrangement.

TABLE 3**ATTENDANCE AT THREE RESEARCH TRAINING INSTITUTES**

<u>Position of Attendee</u>	<u>UCLA Training Institute, 1966</u>	<u>UCLA Training Institute, 1967</u>	<u>NY Training Institute, 1966</u>
President	1	2	
Assistant to President	3	1	
Dean - Academic	2	2	1
Dean - Division	1	3	1
Dean - Students/Men	3	1	
Ass't Dean - Academic	3	3	
Chairman - Academic Dept.	1		
Dir., Admissions/Registrar	2	2	
Director, Research	11	8	
Director, Spec. Services		2	
Dir./Instruc. Data Processing	3		
Director, Publications	1		
Counselor	10	4	
Instructor/Professor	5	9	14 *
Research Ass't	3	1	
Librarian			2
*Phys. Ed. - 2	Accounting	- 1	
Music - 1	Social Science	- 4	
English - 1	Biology	- 1	
History - 2	Modern Lang.	- 1	
	Mechanical	- 1	
	Technology		

NOTE: Due to wide variety of titles, positions have been interpreted to permit consolidation and comparison. Sources are:

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- b. Merson, Thomas B. Principles and Methods of Applied Research for Junior College Researchers, Research Training Institute, University of California, Los Angeles, July 5-30, 1966. Published November 1966.
- c. Hochman, Irvin and Gerhard Lang. A Research Training Institute for Junior College Personnel, State University of New York, July 11 to August 19, 1966. Suffern, N. Y. November 14, 1966.

TABLE 4

ASSISTANCE PROVIDED STAFF IN CONDUCTING RESEARCH

<u>Type</u>	<u>Rainey (1961)</u> <u>N = 25</u>	<u>Johnson (1961)</u> <u>N = 63</u>	<u>Swanson (1965)</u> <u>N = 243</u>
Technical		42%	30%
Secretarial/Clerical	68%	67%	62%
Data Processing Equipment		28%	3%
Outside Consultants		22%	
Supplies/Equipment	52%	62%	16%
Compensatory Time		14%) Reduced Load/ Released Time
Leave	8%	7%	
Reduced Load	20%	20%	
Extra Pay		5%	13%
Other		3%	

NOTE: Figures indicate frequency of response in percent.

TABLE 5

**HINDRANCES TO EFFECTIVE RESEARCH PROGRAMS
(Swanson, 1965 N = 243)**

<u>Problem</u>	<u>% Reporting</u>
Inadequate Finances	6
Lack of Time	66
Staff Reluctance to Use Findings	6
Lack of Competent Guidance	24
Confidential Nature is Limiting Factor	9
Lack of Proper Records	18
Attitude of Board	4
Other	7

APPENDIX A

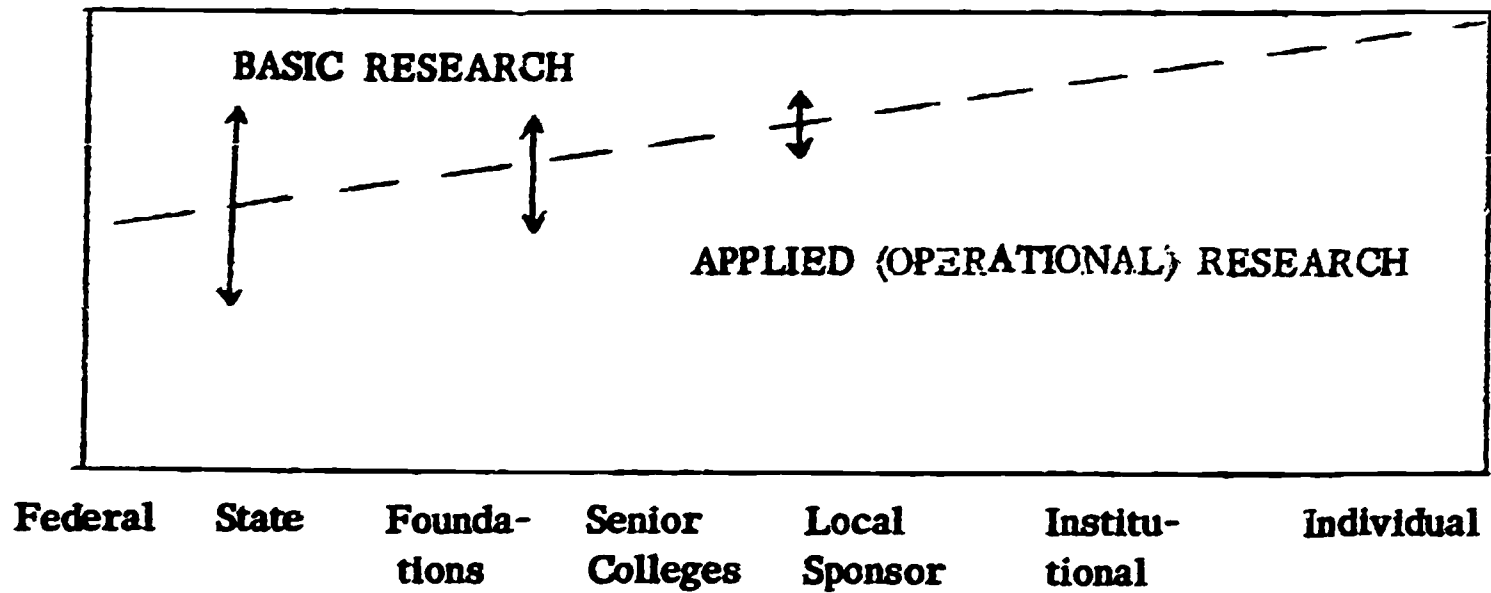


Figure 1 - Possible Division of Labor in Junior College Research (Illustrative - Not Quantitative)

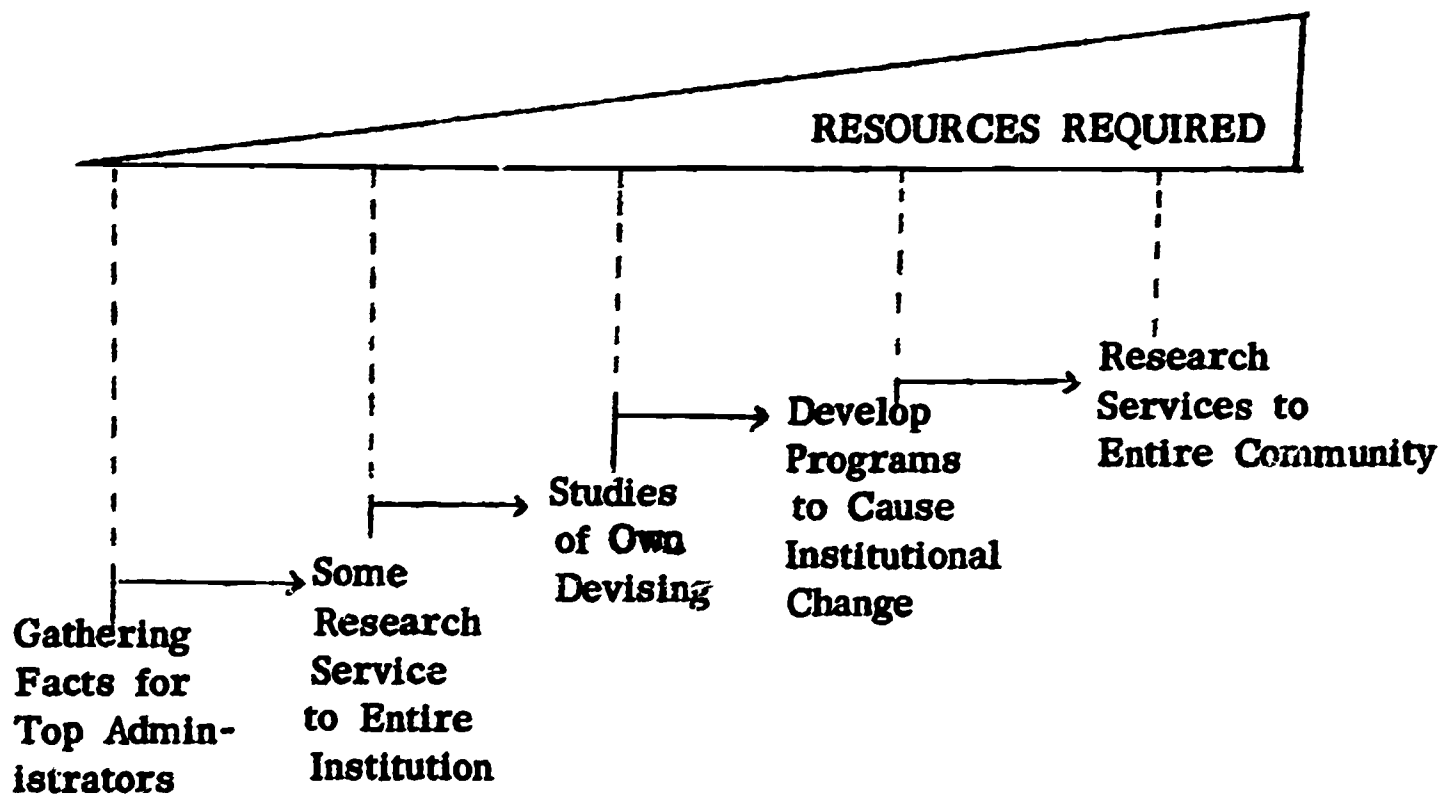


Figure 2 - Considerations in Developing a Desirable Program for Institutional Research

APPENDIX B

EMERGING GUIDELINES FOR RESEARCH

- **Establish a philosophy of research.**
- **Centralize and assign specific responsibility.**
- **Arrange for research head to report directly to the president.**
- **Use institution-wide advisory committee.**
- **Provide adequate financing and assistance.**
- **Plan research carefully.**
- **Seek wide participation by faculty and administrators.**
- **Provide expert guidance.**
- **Seek interinstitutional cooperation.**
- **Maintain centralized files.**
- **Give recognition.**
- **Disseminate findings.**
- **Use findings.**

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